

TIP GAS DISTRIBUTOR

ABSTRACT OF THE DISCLOSURE

A tip gas distributor is provided that preferably comprises a plurality of swirl holes and a plurality of secondary gas holes, wherein the swirl holes direct a plasma gas to generate a plasma stream, and the secondary gas holes direct a secondary gas to stabilize the plasma stream. Additionally, a tip gas distributor is provided that comprises swirl passages and secondary gas passages formed between the tip gas distributor and an adjacent component to generate and stabilize the plasma stream. Further, methods of generating and stabilizing the plasma stream are provided through the use of the swirl holes and passages, along with the secondary gas holes and passages.